

NEWSPACE MARKET · COMPANY PROFILE



WeatherStream (formerly Orbital Micro Systems)

United States · founded 2015 · weatherstream.com

9

PRODUCTS

newspacemarket.com/companies/orbital-micro-systems/

as of 3 September 2026



WeatherStream (formerly Orbital Micro Systems)

Orbital Micro Systems (OMS) spun out of the University of Colorado Boulder's Center for Environmental Technology to miniaturize millimeter-wave radiometer instruments that had previously required large government satellites. The company flew what it describes as the first commercially owned and operated space-based passive microwave radiometer, IOD-1 GEMS, proving that CubeSat-class atmospheric sensing hardware was viable for weather intelligence. OMS now operates under parent brand Weather Stream, Inc., commercializing GEMS constellation weather data alongside software products (WeatherRecord, WeatherLock) and soil-moisture data products, targeting a 15-minute global refresh rate with a focus on historically under-observed regions such as South and Central Asia, Africa, and the Polar regions. The company's partners and customers include NASA, NASA JPL (calibration hardware for the EZIE mission), Ball Aerospace, the UK Satellite Applications Catapult, AAC Clyde Space, Thomas Keating Ltd., the US Air Force, Space Force, and Navy, and Lockheed Martin.

This profile is generated from the live NewSpace Market catalogue. Specifications are as published by the manufacturer; every product links to a page where a request for quotation reaches the company directly.

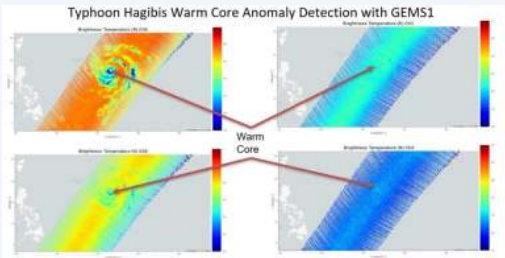
Product catalogue

WEATHERSTREAM (FORMERLY ORBITAL MICRO SYSTEMS)
Global Environmental Monitoring System (GEMS)

GEMS is a constellation of CubeSats developed by Orbital Micro Systems Inc. to provide high-frequency, 3-dimensional temperature and moisture atmospheric profiles using microwave r

Payload size (IOD-1 GEMS)	10 x 10 x 15 cm
Satellite form factor (IOD-1 GEMS)	3U CubeSat
Launch vehicle (IOD-1 GEMS)	Antares-230
Launch date (IOD-1 GEMS)	April 17, 2019
Deployment date (IOD-1 GEMS)	July 3, 2019
Data reception start (IOD-1 GEMS)	July 20, 2019
Data frequency	15 minutes

price on request



WEATHERSTREAM (FORMERLY ORBITAL MICRO SYSTEMS)
Global Environmental Monitoring System (GEMS)

The GEMS family of microwave radiometer instruments are designed to reduce the costs of satellite meteorology and enable improved global weather forecasting.

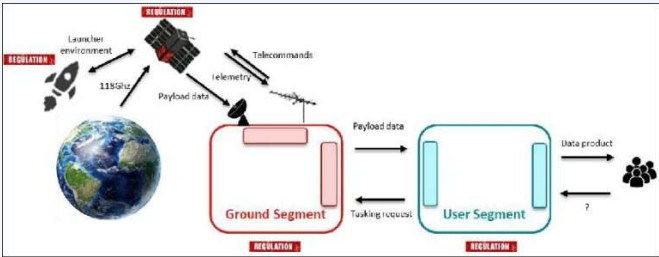
price on request



WEATHERSTREAM (FORMERLY ORBITAL MICRO SYSTEMS)
Global Environmental Monitoring System (GEMS2)

GEMS2 CubeSats will improve the global availability of critical weather data utilizing multi-band microwave radiometers that improve the temporal and spatial resolution of microwav

price on request



WEATHERSTREAM (FORMERLY ORBITAL MICRO SYSTEMS)
MiniRad

MiniRad is a miniaturized passive microwave radiometer built by Orbital Micro Systems (OMS) that measures atmospheric temperature, humidity and precipitation from a 3U CubeSat, flo

Mission type	E0
Agency	Orbital Micro Systems Ltd.
Mission status	Mission complete
Launch date	17 Apr 2019
End of life date	17 Apr 2021
Measurement domain	Atmosphere
Instrument type	Atmospheric temperature and humidity sounders

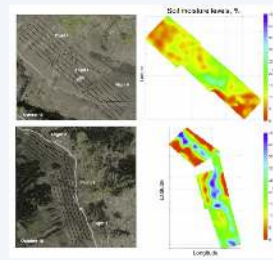
price on request



WEATHERSTREAM (FORMERLY ORBITAL MICRO SYSTEMS)
Proprietary Satellite Weather Data – Microwave Sounder Data

WeatherStream provides proprietary satellite weather data, including microwave sounder data, for climate and weather insights.

price on request



WEATHERSTREAM (FORMERLY ORBITAL MICRO SYSTEMS)
Soil Moisture Data

Weather Stream offers high-resolution soil moisture measurements using uncrewed aerial systems, providing detailed soil moisture mapping across various terrains.

price on request



WEATHERSTREAM (FORMERLY ORBITAL MICRO SYSTEMS)
SPECTRUM

SPECTRUM is a multi-model platform for environmental remote sensing, enabling rapid development of environmental algorithms from remote sensing data for various applications.

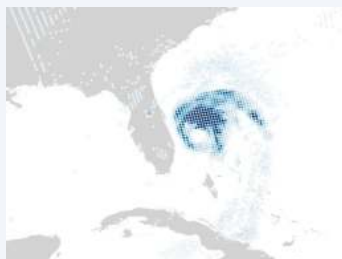
price on request



WEATHERSTREAM (FORMERLY ORBITAL MICRO SYSTEMS)
Weather Lock

Weather Lock is WeatherStream's next-generation numerical weather prediction solution, designed to fully exploit high-resolution passive microwave data from GEMS satellites.

price on request



WEATHERSTREAM (FORMERLY ORBITAL MICRO SYSTEMS)
Weather Record

The Weather Record™ system provides rapid weather data processing and distribution in real-time, offering over-the-horizon weather insights on demand.

price on request

Contact WeatherStream (formerly Orbital Micro Systems)

Open the company profile on NewSpace Market to see full specifications and datasheets, and to send a request for quotation that reaches the manufacturer directly.

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